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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,423	09/23/2003	Chris Catterall	580-B01.US	1091

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EXAMINER
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DAILEY, THOMAS J

ART UNIT	PAPER NUMBER
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2152

MAIL DATE	DELIVERY MODE
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06/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/667,423

Applicant(s)

CATTERALL ET AL.

Examiner

Thomas J. Dailey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/23/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-33 are pending in this application.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-20 and 27-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 9, 12, and 27 contain the trademark/trade name Ethernet. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the

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trademark/trade name is used to identify/describe a type of network hub or digital link and, accordingly, the identification/description is indefinite.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by

Ellington, Jr. (US Pub. No. 2001/0009021), hereafter "Ellington."

7. As to claim 1, Ellington discloses a communication circuit for use within a vehicle (Abstract), the circuit comprising:

a first network port (Fig. 1 and [0021], any networked device on the vehicle, e.g. a mobile computer connected to the passenger LAN); and

a second network port located remote from the first network port and digitally connected thereto for digitally communicating a signal therebetween ([0021], lines 3-7, devices on a terrestrial network).

8. As to claim 2, Ellington discloses the first network port and the second network port are connected by a digital link ([0021]).
9. As to claim 3, Ellington discloses the first network port is connected to a first network segment and the second network port is connected to a second network segment ([0021], mobile computer will be connected to the passenger LAN, and the terrestrial devices will be connected to the terrestrial network).
10. As to claim 4, Ellington discloses a third network segment is connected between the first network segment and the second network segment ([0021], lines 3-7, the wireless portion of the network).
11. As to claim 5, Ellington discloses each network segment includes a multi-port network hub, the first and second network ports being connected to their respective multi-port network hubs ([0021], the network switch and the wireless transceiver).
12. As to claim 6, Ellington discloses at least one peripheral network communication device is connected to each of the multi-port network hubs ([0021], mobile computer for use by a passenger and any terrestrial device connected to the terrestrial network).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 7-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellington as applied to claim 6 above, and further in view of Sullivan ("The IEEE 1473-L Communications Protocol: Experience In Rail Transit", *APTA Paper, June 2002*, accessed <<http://www.tsd.org/papers/IEEE%201473-L%20Communications%20Protocol.pdf>>).

15. As to claim 7, Ellington discloses the invention substantially with regard to the parent claim 6, but does not disclose at least one peripheral network communication device is a control head.

However, Sullivan discloses a networked vehicle where at least one peripheral network communication device is a control head (page 295, right-hand column lines 22-36 and page 296, Fig. 2).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ellington and Sullivan in order utilize the already in place network of Ellington to also manage devices rather than creating a redundant network to do so.

16. As to claim 21, Ellington discloses a communication circuit for use on board a train having at least two vehicles coupled together (Abstract), the circuit comprising:

a first Local Area Network having a first interface (Fig. 1 and [0021], any networked device on the vehicle, e.g. a mobile computer connected to the passenger LAN);

a second Local Area Network having a second interface ([0021], lines 3-7, devices on a terrestrial network); and

the first interface and the second interface being connected by a digital link for digitally communicating a signal between the first and the second Local Area Networks ([0021]).

But, Ellington does not explicitly disclose where the first network is located in one vehicle, and the second network is located in the other vehicle.

However, Sullivan discloses a communication circuit for use on board a train having at least two vehicles coupled together where a first network

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is located in one vehicle, and a second network is located in the other vehicle (Sullivan, page 295, right-hand column lines 15-21 and page 296, Fig. 1).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ellington and Sullivan in order utilize the segregated structure of a train (i.e. the individual train cars) as a natural demarcation point for the LANs thus facilitating easier management of the entire networked train.

17. As to claims 8 and 26, Ellington and Sullivan disclose the invention substantially with regard to the parent claims 7 and 25, and further disclose at least one peripheral communication device is connected to the control head (Sullivan, page 295, right-hand column lines 22-36 and page 296, Fig. 2).

18. As to claims 9 and 27, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 8 and 26, and further disclose each multi-port network hub is a multi-port ETHERNET.TM. network hub (Ellington, [0005], lines 14-18).

19. As to claim 10, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 9, and further disclose the first, the second



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and the third network segments define a first Local Area Network

(Ellington, [0021]).

20. As to claim 11, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 10, and further disclose the first, second and third network segments are respectively first, second and third Local Area Network subsystems (Ellington, [0021]).

21. As to claim 12, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 11, and further disclose the digital link is an ETHERNET.TM. digital link (Ellington, [0005], lines 14-18).

22. As to claim 13, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 12, and further disclose a train includes at least two vehicles connected together by a coupler, the first Local Area Network being located in one vehicle, a second Local Area Network being located in the other vehicle (Sullivan, page 295, right-hand column lines 15-21 and page 296, Fig. 1).

23. As to claim 14, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 13, and further disclose the first Local Area Network includes a first interface and the second Local Area Network includes a second interface (Ellington, [0021]).

24. As to claim 15 and 28, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 14 and 27, and further disclose the first interface is a control unit having a digital link receiver port and a wire connector connected to the first network port (Sullivan, page 295, right-hand column lines 22-36 and page 296, Fig. 2).
25. As to claims 16 and 32, Ellington and Sullivan disclose the invention substantially with regard to the parent claims 15 and 31, and further disclose at least one of the vehicles is sectioned and articulated (Sullivan, page 295, right-hand column lines 15-21 and page 296, Fig. 1).
26. As to claim 17, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 16, and further disclose the coupler includes a digital link integral therewith (Sullivan, page 295, right-hand column lines 15-21 and page 296, Fig. 1).
27. As to claims 18 and 31, Ellington and Sullivan disclose the invention substantially with regard to the parent claims 17 and 30, and further disclose the digital link is an RS-485 connection (Sullivan, page 295, right-hand column lines 15-21 and page 296, Fig. 1).

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28. As to claim 19, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 18, and further disclose the control unit includes a plurality of peripheral device connector ports (Sullivan, page 295, right-hand column lines 22-36 and page 296, Fig. 1).

29. As to claims 20 and 33, Ellington and Sullivan disclose the invention substantially with regard to the parent claims 19 and 32, and further disclose the peripheral communication device include sign units, emergency intercoms, public address amplifiers, radio systems, consoles or laptop computers (Ellington, [0020]).

30. As to claim 22, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 21, and further disclose each of the Local Area Networks includes first, second and third Local Area Network subsystems (Sullivan, page 296, Fig. 2).

31. As to claim 23, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 22, and further disclose each Local Area Network subsystems includes a multi-port network hub (Ellington, [0021]).

32. As to claim 24, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 23, and further disclose at least one peripheral network communication device is connected to each of the

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multi-port network hubs (Ellington, [0021], mobile computer for use by a passenger and any terrestrial device connected to the terrestrial network).

33. As to claim 25, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 24, and further disclose at least one peripheral network communication device is a control head (Sullivan, page 295, right-hand column lines 22-36 and page 296, Fig. 2).

34. As to claim 29, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 28, and further disclose the control unit includes a plurality of peripheral device connector ports (Sullivan, page 295, right-hand column lines 22-36 and page 296, Fig. 2).


35. As to claim 30, Ellington and Sullivan disclose the invention substantially with regard to the parent claim 28, and further disclose the digital link is integral with a coupler coupling the two train vehicles (Sullivan, page 295, right-hand column lines 15-21 and page 296, Fig. 1).

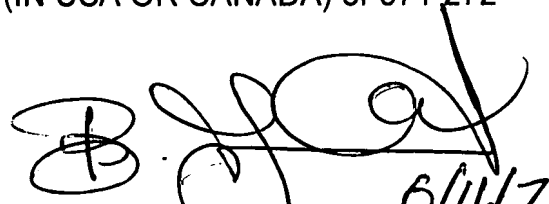
### ***Conclusion***

36. For additional prior art made of record and not relied upon and considered pertinent to applicant's disclosure see attached Notice of References Cited, Form PTO-892.

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37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Dailey whose telephone number is 571-270-1246. The examiner can normally be reached on Monday thru Friday; 9:00am - 5:00pm.
38. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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5/29/2007

  
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6/4/7